CCS Technical Documentation
RH-3 Series Transceivers

Service Software Instructions

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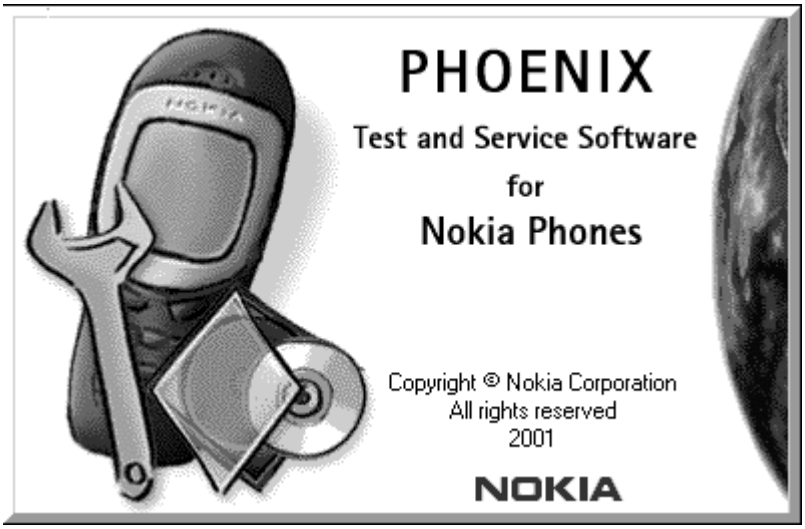
Phoenix User's Guide



Introduction

This section briefly describes how to install Phoenix and includes some basic information on how to use the program. More detailed information can be found in the Phoenix Help files. Each feature in Phoenix has its own Help file, which can be activated whil running Phoenix. To activate a Help file while Phoenix is running, press the **F1** key or the specific feature's **Help** button.

General Setup Procedure

Initial installation of Phoenix requires the complete Phoenix installation package. This package, currently around 30 Megabytes in size, is provided on a CD-ROM disk. Because of this large size, it is not recommended to download the file nor is it practical to provide it on 3.5-inch floppy disks.

Install Phoenix by following the steps outlined on the material that comes with the disk. It should be noted that installation of a Nokia dongle on the computer being loaded is REQUIRED prior to beginning the installation of the software.

The software is packaged into an *Installshield* executable bundle. When the user double-clicks on this file, the installation program provides on-screen instructions on how to proceed. Standard installation, provided by selecting all default choices, is highly recommended. You may do a custom installation and place Phoenix into a special location on your hard drive, but this is only recommended for experienced users.

It is necessary to reboot the computer after installing the software. The program will not be usable until a reboot is performed. After reboot, the Phoenix icon is displayed on the computer desktop. Double-clicking on this icon launches the program.

Hardware Requirements for using Phoenix

Minimum Hardware Requirements	
Processor	233 MHz
RAM	64 MB
Disk Space Needed	50-100 MB

Supported Operating Systems	Notes
Windows 95	Limited, no USB support
Windows 98	
Windows NT 4.0	no USB support
Windows 2000	Professional version

Installing Phoenix

Before installing the software, verify:

- The dongle is attached to the parallel port for PKD version dongles, or an FLS-4 version dongle is attached on either the parallel port or the USB port (if the computer supports USB).

- Ensure that if the computer supports administrator rights (typically on Windows NT and Windows 2000 installations) that access is enabled for the user performing the Phoenix installation.

- If a previous version of Phoenix has been installed, it may be necessary to first properly remove that program prior to installing the new version. If installation is performed, be sure to reboot the computer prior to continuing. See the section **Uninstalling Phoenix** for instructions on how to uninstall.

Installation Directions

- Insert the CD-ROM disk into the computer drive

- Access the drive and double-click on the Phoenix software package found on the CD.

- Follow the on-screen prompts to conclusion.

Note that rebooting the computer may be necessary when completed.

Software Support Bundles:

The Phoenix installation is auto-executable. You must obtain Software Support Bundles to load software upgrade files to customer-specific phone models.

These bundles are created by PAMS and made available by AMS on the Partners Web Page http://americas.partners.nokia.com. This web page is password-controlled; if you have not registered as a user, contact Nokia Central Service in Melbourne, Florida.

Similar to the Phoenix installation, these Software Support Bundles are *InstallShield* executable packages. Just double-click on the package and it will auto-install.

No rebooting of the computer is required.

Starting a Phoenix Session

Concepts

When referring to Phoenix, *Product* is the cellular phone attached to the computer. More specifically, it is the particular type of phone.

Connection is the type of cable used to attach the phone and the port on the computer where it is attached. Refer to *Chapter 7-Service Tools* for additional information.

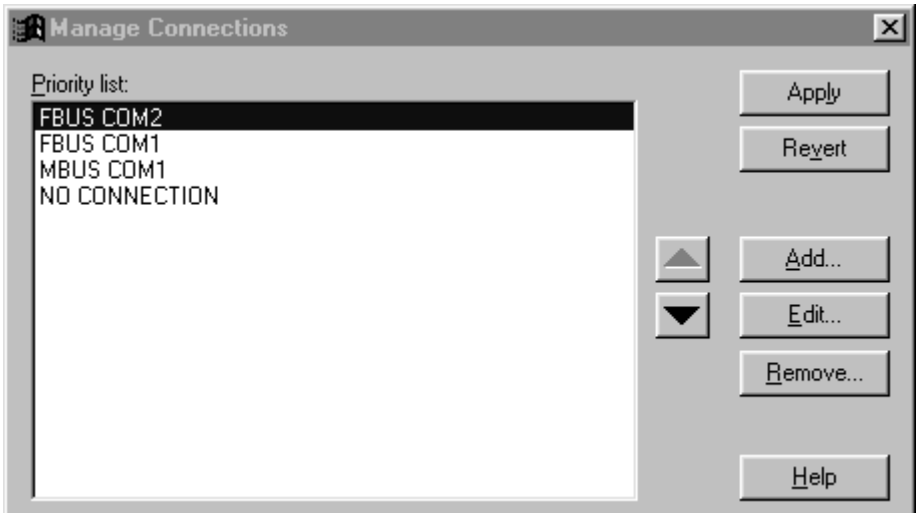
The first time Phoenix is used, certain connection configurations must be made. Subsequent uses will rely on these selections and they will not need to be made again.

Initial Session with Phoenix

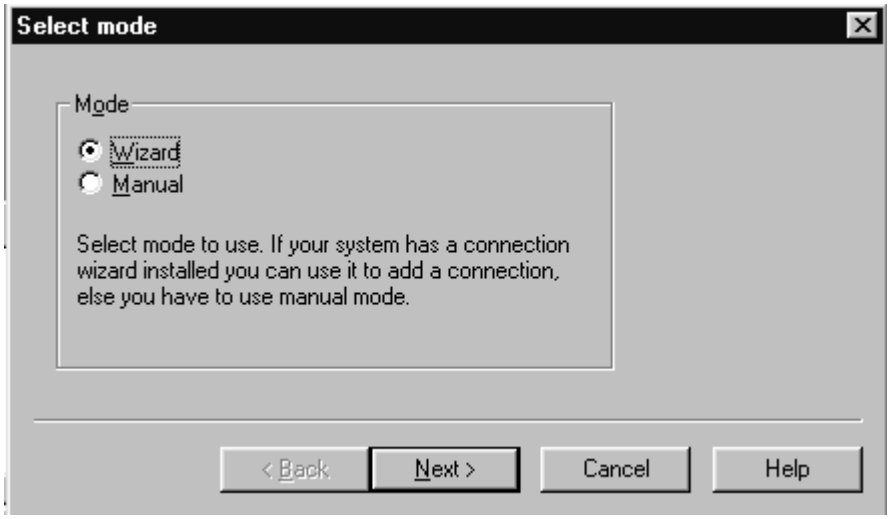
It is necessary to create the connection the first time Phoenix is used. Follow these simple steps:

Select Manage Connections... from the "File" drop-down menu.

Next click the **Add...** button to create a new connection.



When the *Select Mode* dialog box appears, you may then select either Wizard, which will auto-detect your connection configuration, or Manual, which allows you to manually select options to create the connection.


Select mode
Mode
Wizard
Manual
Select mode to use. If your system has a connection wizard installed you can use it to add a connection, else you have to use manual mode.
< Back
Next >
Cancel
Help

Once a connection is defined, make sure that the one to be used is moved to the top of the list (use the up down arrows on the *Manage Connections* dialog box. Then click on the **Apply** button. Close the window when finished.

You can now proceed with the normal initiation of a session by selecting a product or scanning for a product.

Scanning for a Product

Many features of this program are product-specific. Therefore it is necessary to configure Phoenix for the product on which you will be working at the beginning of the session.

Scan Product – Choose Scan Product from the drop-down menu list and Phoenix will automatically scan for product and select the necessary configurations. The status bar at the bottom will indicate if the product was found and its type.

Using Components

When working with Phoenix, tasks are generally managed by specific software components. From the menu, select the desired component or task to be performed.

"Opening a component" is defined as opening a tool window within Phoenix. When this window is opened, Phoenix also opens a toolbar for it and adds component-specific menu items in the Window menu.

Using Profiles

Phoenix's Profile feature allows product, connection and currently open components to be stored into permanent storage by creating a profile file with a name of your choice followed by an *.nmp* file extension for later retrieval.

Saved profiles makes it easy to configure Phoenix into a desired configuration with favorite windows already opened and ready to go.

Opening and saving profiles is done via menu commands found in the *File* drop-down menu: *Open Profile* and *Save Profile.*

Profiles are stored into a disk file with user-defined names. As a result, there can be multiple profiles for different repeated tasks or user preferences.

Uninstalling Phoenix

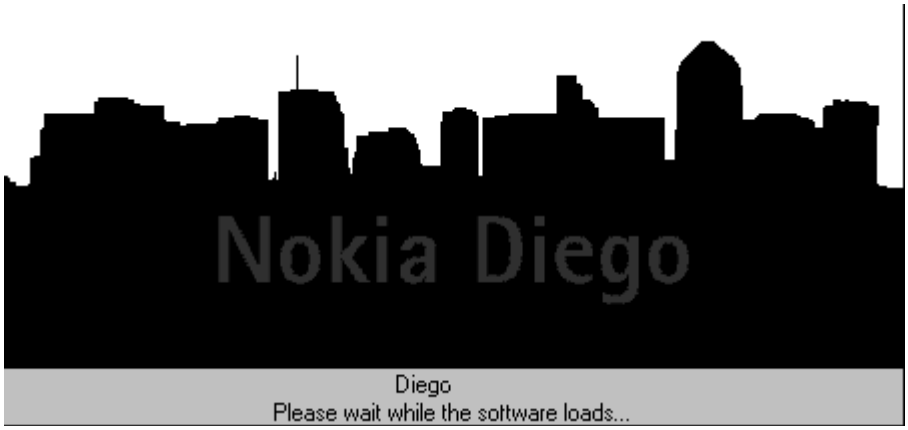
As mentioned in the **Installing Phoenix** section, it may be necessary or desirable to remove Phoenix. Care must be taken to follow this procedure. Failure to remove the program properly will cause misconfiguration of the computer's registry.

Uninstalling Phoenix version:

- Access the computer's "Control Panel" section, selectable from the **Start** button or the "My Computer" desktop icon
- Select the "Add/Remove Programs" icon
- Select the Phoenix version to be removed, and click the **Add/Remove** button
- Click on the **OK** button to begin the process of removal
- Follow the on-screen instructions

Be sure to reboot the computer when finished.

Diego User's Guide



Introduction

This section briefly describes how to install Diego 2.10 and includes some basic information on how to use the program. More detailed information can be found in the Diego Help files. Each feature in Diego has a Help file that can be activated while running Diego. To activate a Help file while Diego is running, press the **F1** key or the specific feature's **Help** button.

Diego 2.10 is designed to be used by point-of-sales locations. Ease of use and minimal operator decision-making were key factors in the design.

Supported Phones

2270, 2272, 2285 3280, 3285 3570, 3585, 3585i 5170i, 5180i, 5185 6370, 6385

8270 8280 6180i, 6185i

General Setup Procedure

Initial installation of Diego requires the complete Diego installation package. This package, currently around 18 Megabytes in size, is provided on a CD ROM disk. Because of this large size it is not recommended to down load the file nor will it be practical to provide it on 3.5-inch floppy disks.

Install Diego by following the steps as outlined on the material that comes with the disk.

The software is packaged into an install executable bundle. This means that one merely needs to double click on this file and the installation program will provide on-screen instructions on how to proceed. Standard installation, provided by selecting all default choices, is highly recommended. You may do a custom installation and place Diego into a special location on your hard drive, but this is only recommended for experienced users.

It will be necessary to reboot the computer after installing the software. The program will not be usable until a reboot is done. After reboot, the Diego Icon will be available on the computer desktop. Double clicking on this Icon will launch the program.

Hardware Requirements for using Diego

Minimum Hardware requirements	
Processor	233 MHz
RAM	64 MB
Disk space needed	50 - 100 MB

Supported Operating systems	Notes
Windows 95	Not supported
Windows 98	
Windows NT 4.0	no USB support
Windows 2000	Professional version
Windows XP	Professional version

Support Dongles and Cables

Diego version 2.10 can be used with various dongles and cable configurations. This section will describe the configurations and required hardware. Note that although the FLS-2D can be used with Diego 2.10 for DCT-3 product support, that particular version of dongle is now considered obsolete and is no longer officially supported.

FLS-4S

The FLS-4S is a multi-purpose dongle that supports both DCT-3 and DCT-4 products. In addition, it can be used as either a standard parallel port connected dongle or as a USB port connected dongle. Support cables and flash adapters are available for all released products.

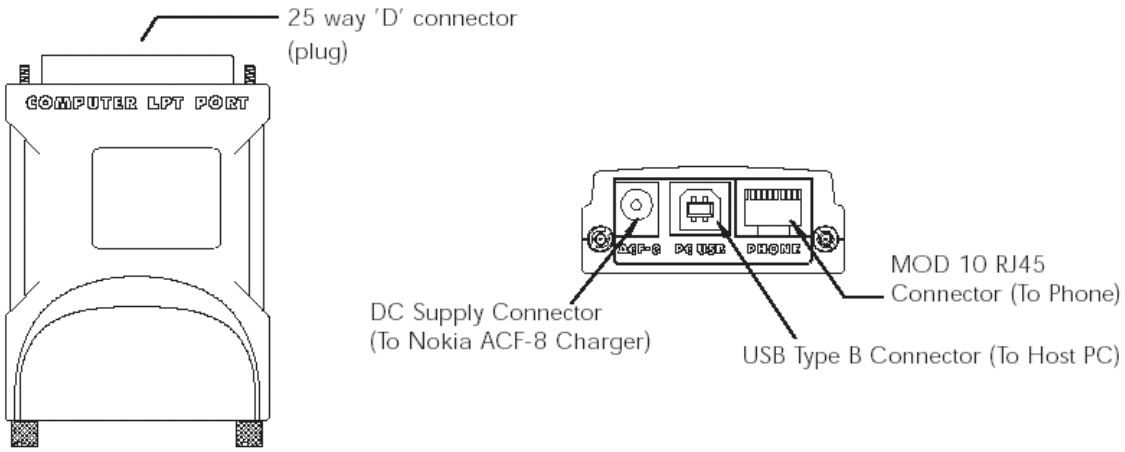


Figure 1: FLS-4S

FLS-4S Hardware Required

· **0080543** FLS-4S sales package - hardware included with sales package

FLS-4S dongle

ACF-8 power supply

· **0730166** SCH-5 DCT-3 phone interface cable (MOD 10 RJ45 to Nokia DCT-3 phone bottom connector)

· **0730218** XCS-1 DCT-4 interface cable (MOD 10 RJ45 to MOD 10 RJ45 and charger plug to specific phone model flash adapter)

· **0770xxx FLA-xx** Point of Sales flash adapter (select version for specific phone model, refer to service manual for part number)

· Universal A/B USB cable for use with USB port (standard USB cable available from sources other than Nokia)

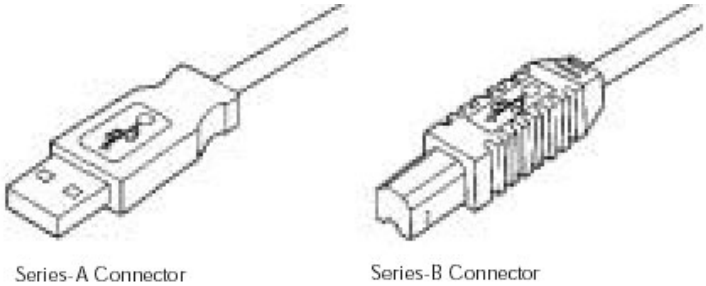


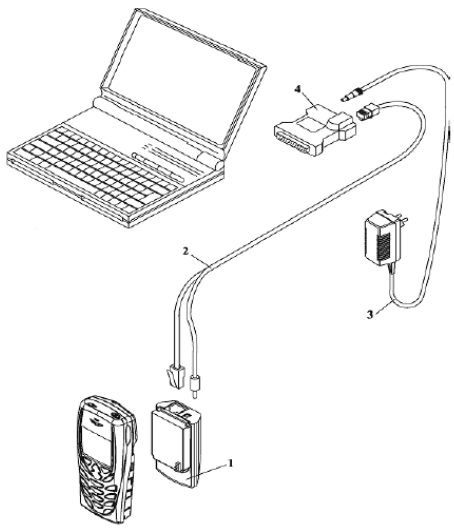
Figure 2: USB A/B Cable

Cabling/ Configuration for FLS-4S Using Parallel Port

The following is an example of the necessary cable configuration for the FLS-4S. To use the dongle on the USB port, add the USB A/B cable and connect to the computer USB port instead of the parallel port.

POS Set-Up

POS Flash Setup 1



1. FLA device
2. XCS-1 cable
3. Power supply
4. FLS-4S

DKU-5F Flash Cable

The DKU-5F flash cable is designed for phones that have the Tomahawk connector on the bottom of the phone. Through this cable, it is possible to flash the phone without the use of a flash adapter (FLA). This cable is a direct computer USB port to phone Tomahawk connector.

The cable is a hybrid cable consisting of two systems multiplexed in one cable. One system is the original RS-232 data module used by the DKU-5 cable. The second system is the flashing module from the FLS-4 cable. Drivers on the PC control multiplexing of the two systems.

Figure 3: DKU-5F Flash Cable

FLC-20 Flash Dongle and Cable

The FCL-20 is an inline flash dongle that can be used on either a USB port or a serial port. It supports all current CDMA products by using the appropriate cable and/or flash adapter. Refer to the specific service manual for details of required cables and flash adapters.

Figure 4: FLC-20 dongle (far left); Serial port cable (middle); USB port cable (far right)

Cable Configuration to support both DCT-3 and DCT-4

The following configuration can be used to support both DCT-3 version phones and new version DCT-4 that have the Tomahawk connector. This dual cabling configuration allows for simple cable connection to the appropriate phone without the need to change any physical connections on the computer.

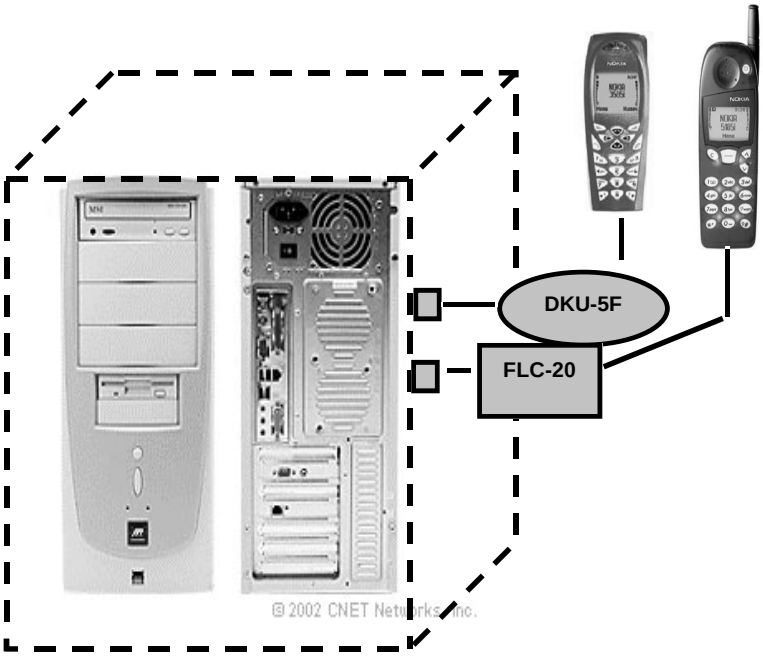


Figure 5: Dual cabling configuration

After executing the Diego program, disable the auto-connection function (phone status box in lower left left-hand corner will be grey). Then, in Settings, select the port you wish to use. Enable the auto-connection and the program will connect to the handset on that port.

Installing Diego

Before installing check that:

- Ensure that if the computer supports administrator rights (typically on NT and Windows 2000 installations) that access is enabled for the user performing the installation.
- If a previous version of Diego has been installed, it may be necessary to first properly remove that program prior to installing the new version.
- Once removal is performed, be sure to reboot the computer prior to continuing. See *Uninstalling Diego* for instructions on how to uninstall.

Installing:

- Insert the CD ROM disk into the computer drive.
- Access that drive and double click on Diego software package found on the disk.
- Follow the on-screen prompts to conclusion.
- Note that rebooting the computer will be necessary when completed.

Software Support Bundles:

- The Diego installation is a generic tool software load. In order to support specific custom transceivers (customer specific phone models) it is necessary to also obtain Software Support Bundles.
- These bundles are created by CCS and made available by AMS on the Partners Web Page http://americas.partners.nokia.co . This web page is password-controlled so if you have not registered as a user, contact Nokia Central Service in Melbourne, Florida.
- Similar to the Diego installation, these packages are executable packages. Just double click on the package and it will auto-install.
- No re-booting of the computer is necessary.

Starting a Diego Session

Concepts

When referring to Diego, *Product* is the cellular phone attached to the computer. More specifically, it is the particular type of phone.

Connection is the type of cable used to attach the phone and the port on the computer where it is attached.

The first time Diego is used, certain connection configurations must be made. Subse-

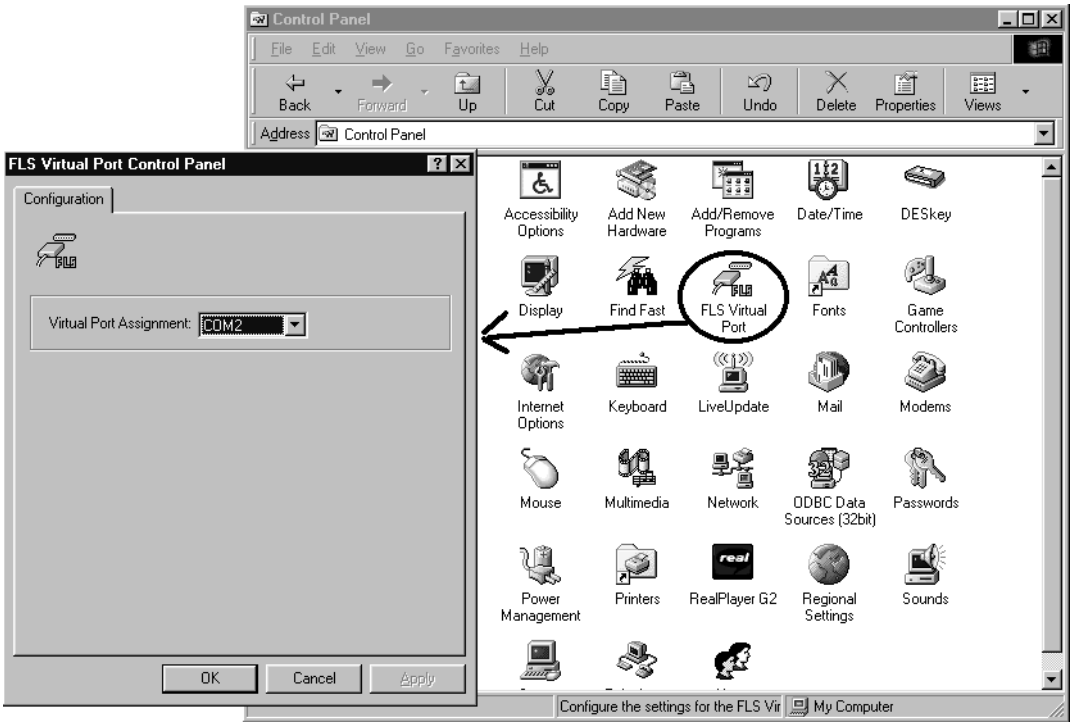
quent uses will rely on these selections and they will not need to be made again.

Initial Session with Diego and FLS-4S Dongle

It is necessary to configure in Diego the Virtual Port Connection the first time Diego is used. The FLS-4 dongle uses Virtual port which eliminates the need to use the serial port as the FLS-2D does. During the installation of the FLS-4 drivers (included in the Diego installation package), a virtual COM port is set to the next available COM port number. This port selection must be put into the Diego configuration.

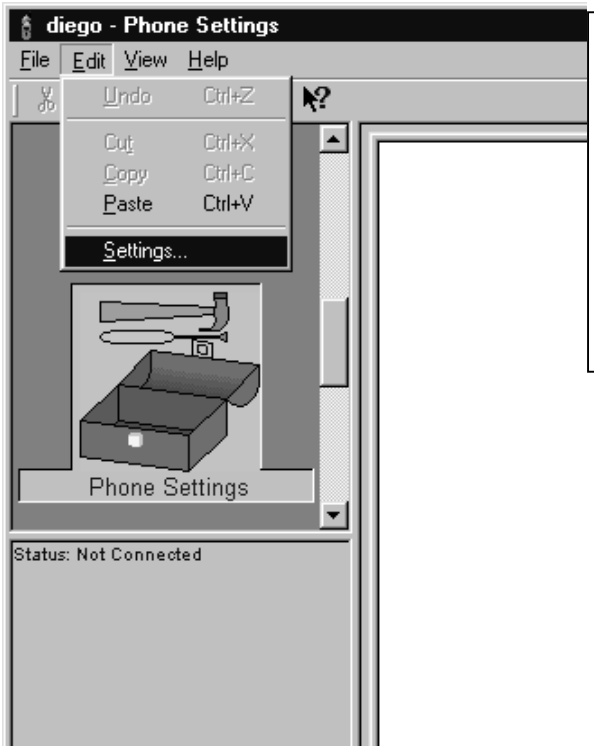
Follow these simple steps:

Select My Computer desktop icon and click on the Virtual Port icon



Make note of the Virtual Port Assignment (COM 2 in this example).

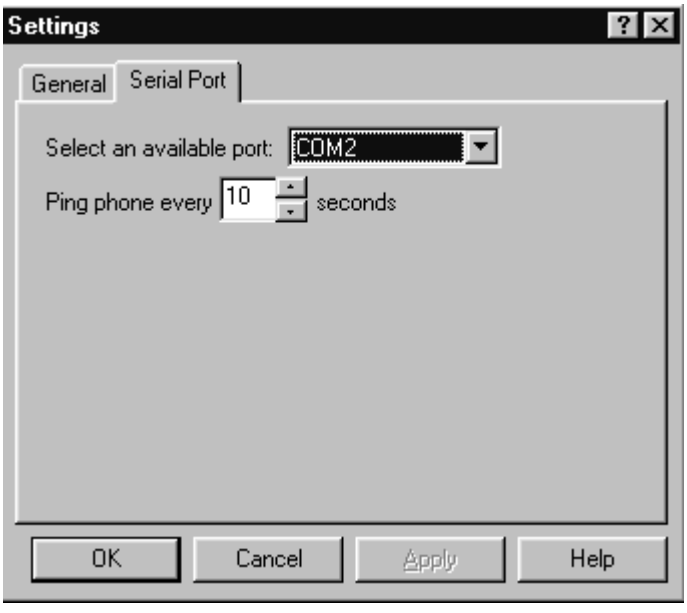
Next select "Add..." to create a new connection.



Note: COM port settings can only be entered or changed if the auto-connection feature of Diego is disable (as indicated by the grey Status box).

To disable the auto-connect click on this icon in the tool bar:

Select the Virtual COM port setting. Then press the **Apply** button.



You can now proceed with the normal initiation of a session.

Scanning for a Product

Many features of this program are product-specific. Therefore it is necessary to configure Diego for the product you will be working on at the beginning of the session.

Scanning of the product can be done manually or automatically. The default setting is

automatic. This setting can be changed to manual in the "settings" - "general" box. In automatic mode Diego will automatically scan for a product at a periodic rate. The rate is defaulted to every 10 seconds but can be changed to a different frequency in the setup menu.

To manually scan for a product, click on the "Select" icon as noted above.

Using Components

When working with Diego, tasks are generally managed by specific software components. From the icons displayed on the left side of the screen, select the desired component or task to be performed.

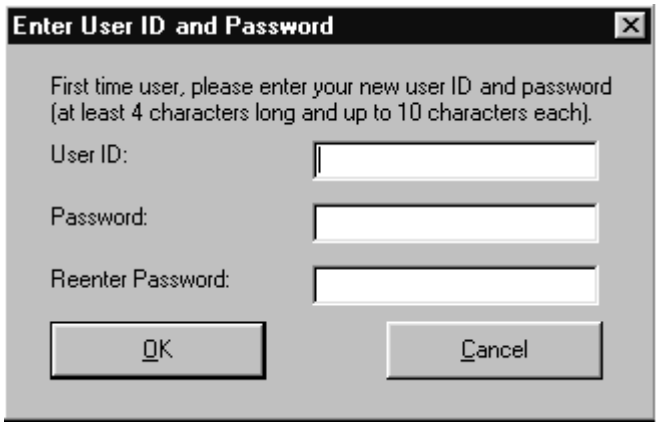
"Opening a component" is defined as opening a tool window within Diego. When this window is opened, Diego also opens a task box for it, which includes component-specific menu items.

Functions

The following section describes the functions available and how to use them. Note that each function is available for DCT-3 and well as DCT-4 model phones. Some screens may be slightly different depending on model-specific requirements.

Administration Function

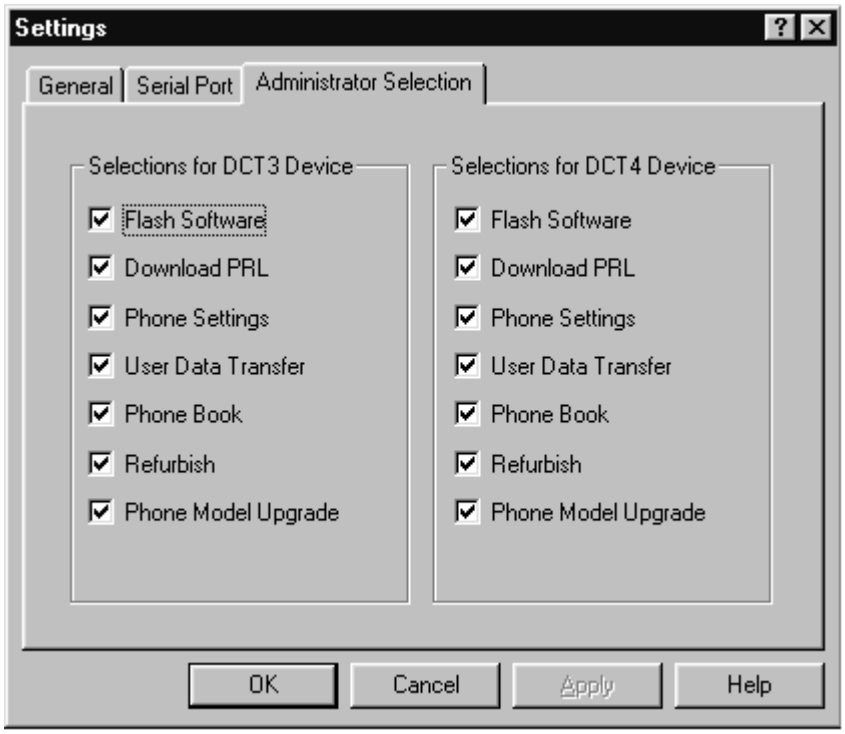
This is a new function available with Diego 2.10. With this function an Administrator can create a user name and password, select settings and then be able to select which specific functions are to be displayed and which functions should be hidden. (Once selected and applied, only those selections checked will be displayed.) To change the selection, the Administrator must log in and enter the correct password.


Enter User ID and Password
First time user, please enter your new user ID and password
(at least 4 characters long and up to 10 characters each).
User ID:
Password:
Reenter Password:
OK
Cancel

Selecting "Log In" located on the tool bar accesses the box illustrated above.

If the password and/or user name is lost, re-installing the program resets the log in to "first time user" and will allow entry of a new user name and password.

Administrator Selections



Once logged in as the Administrator, the above box can be accessed via the Settings selection on the tool bar. Clicking on the box will toggle the checkmark. Those items with a checkmark will be displayed and those without a checkmark are not displayed. This tab on the Setting box is not displayed if the user is not logged in as the Administrator.

Flash Function

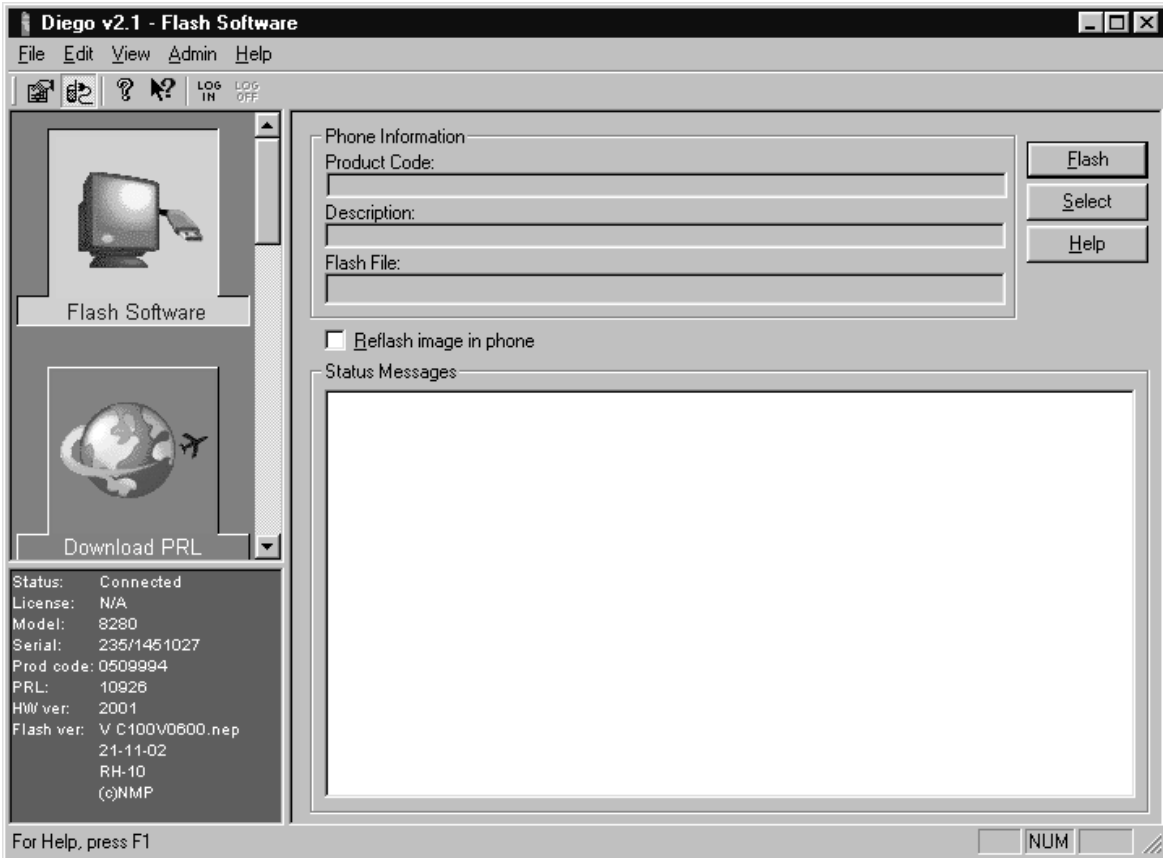


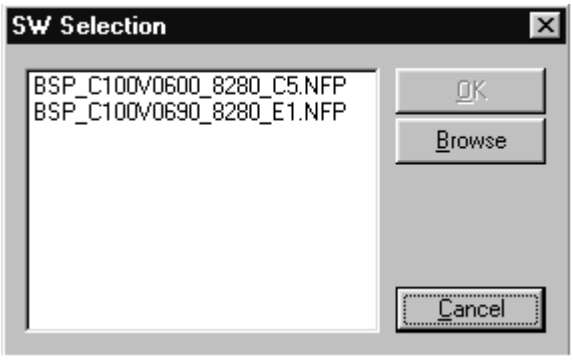
Figure 6: Flash screen for DCT-4 products

Note that for DCT-3 model phones it is necessary to browse to the desired flash file and select it. With DCT-4 models, Auto Pick is utilized and by selecting Flash it will automatically select the most recent version of authorized flash software for that phone.

If the phone already has that version installed, the program will skip the flashing and only do a PRI update. If the "Reflash image in phone" box is checked, it will re-flash the same version of software into the phone.

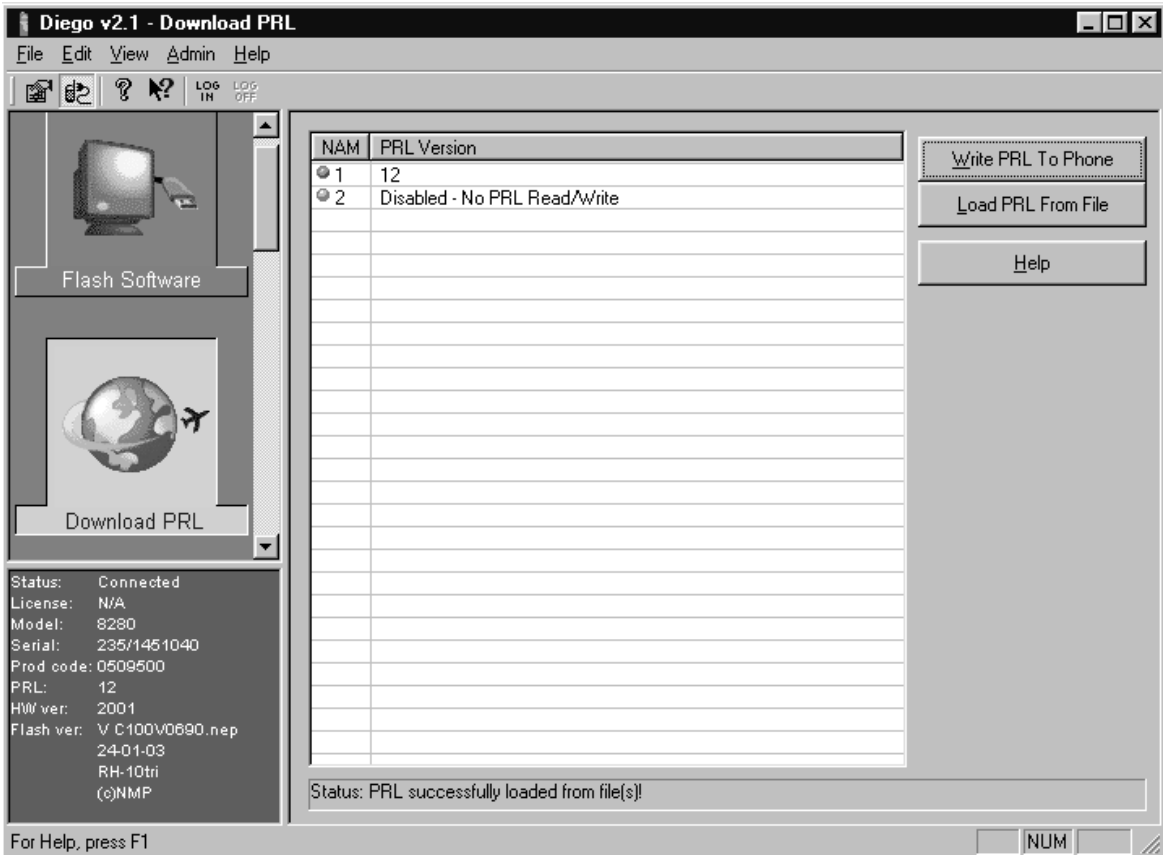
Flash Select

If desired, it is possible to manually select the version of software to be loaded. Still the Auto-pick file directs the selections provided. In this way only acceptable, authorized versions can be selected. It is not possible to select a version that is not specifically for the phone variant connected.



Loading PRL

Loading a PRL into the phone is a manual function. There currently is no auto-pick for PRL. Click the **Load PRL From File** button to select the PRL to be loaded into each NAM available in the phone. Note that if the phone configuration only allows NAM 1 it will not be possible to select and load a PRL into NAM 2.



When the desired PRL has been loaded, it is now possible to select the **Write PRL To Phone** button. Prior to this, the button has been greyed out, thereby preventing selection. Note that to successfully load a PRL into the phone requires both of these steps — loading and writing.

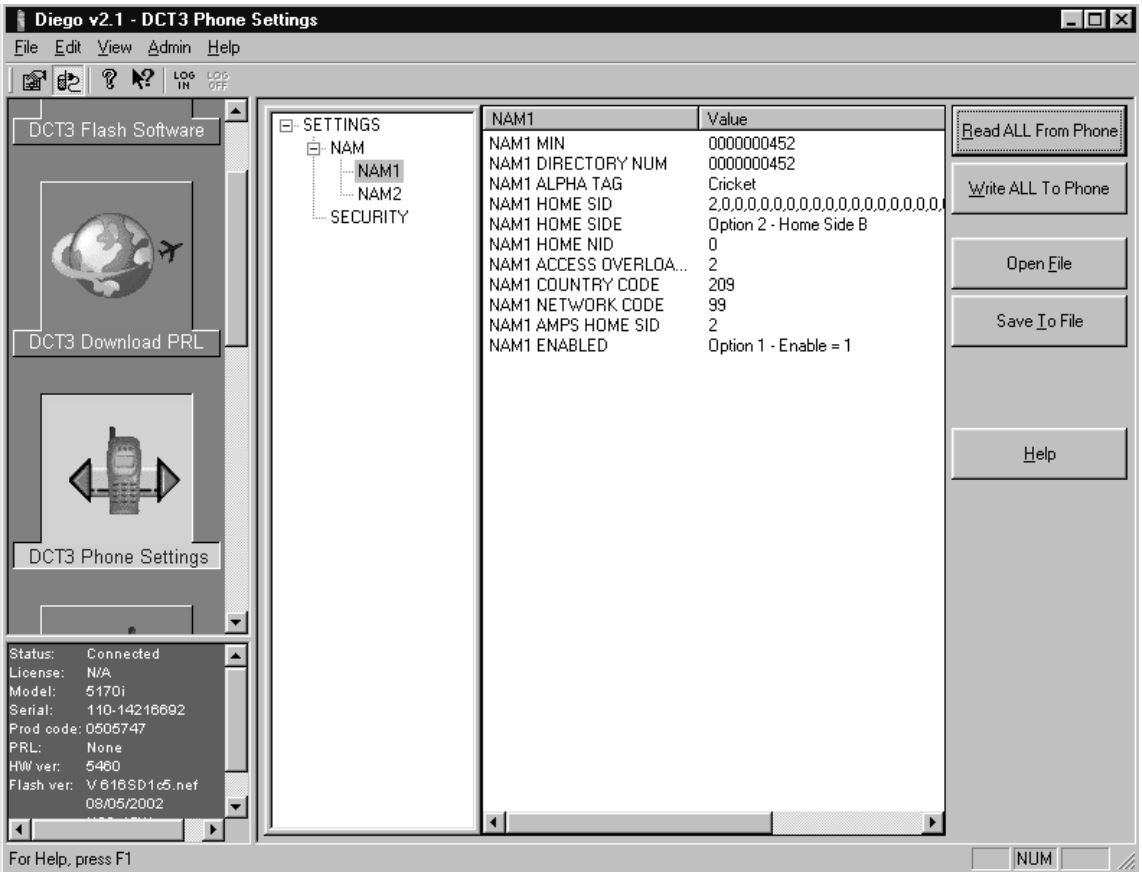
Phone Settings

This function allows the selection and editing of phone settings such as NAM configura-

tion, IP address, and emergency numbers. Although this function is available for DCT-3 model phones, it may not be available to DCT-4 phones. If it is not available, the following warning will appear.

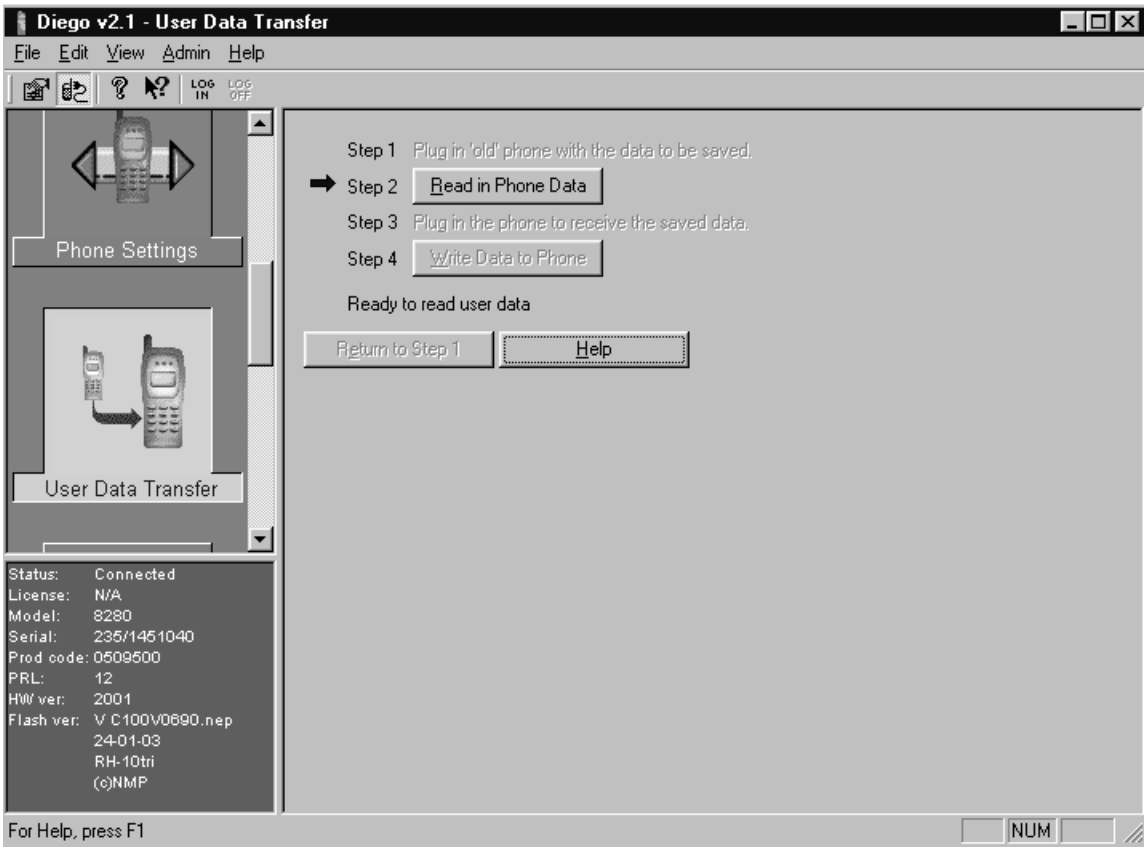
Phone Settings
The software currently loaded in the phone does not support editing of the settings from the computer.
Please use Long NAM Programming via the handset keypad in order to modify the phone's settings.
OK

Since the phone software allows supports for this feature, the tool will automatically allow the phone settings screen and its functions to be accessed.



User Data Transfer

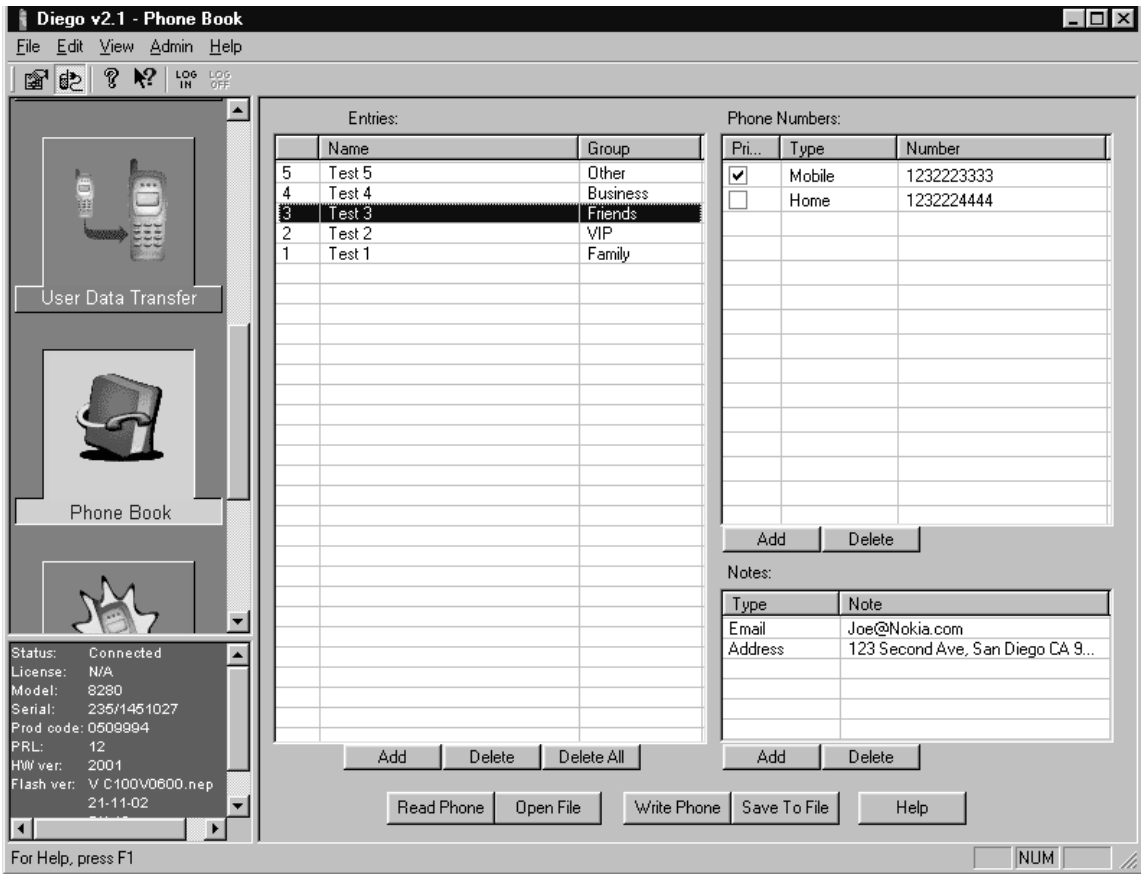
This function allows the transfer of all user data (such as phone book, call logs, SMS, timers, NAM data, and phone settings) into a new, same-model phone. This is useful when providing a replacement phone due to a warranty issue.



Note that the arrow will point to the current step and will automatically direct the sequence. After the old phone has been saved, the program will wait until a new phone is detected and the **Write Data to Phone** button is pressed.

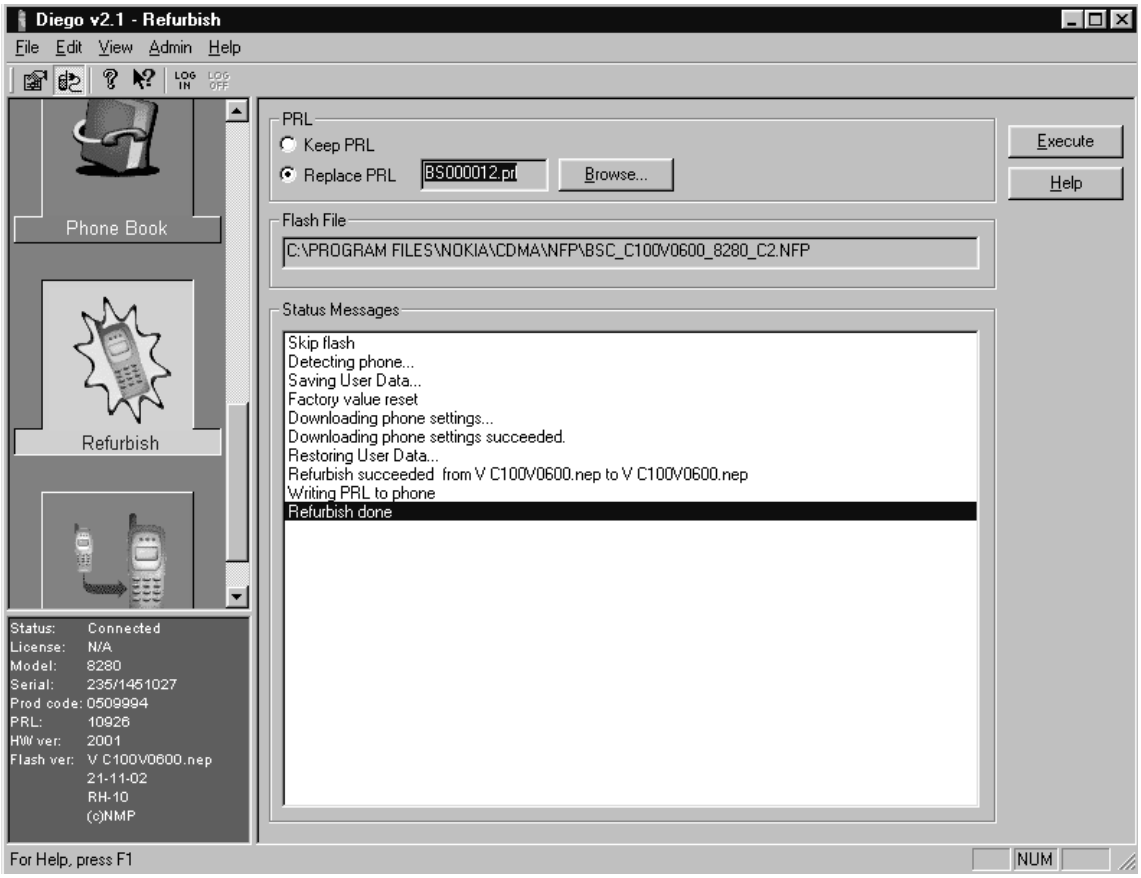
Phone Book Function

With this function it is possible to read, edit, and save either to the phone or a file located on the computer all phone book entries. Note that it is also possible to save a phonebook from any Nokia CDMA version phone to the computer and then load that file into any other version of Nokia CDMA phone.



Refurbish Function

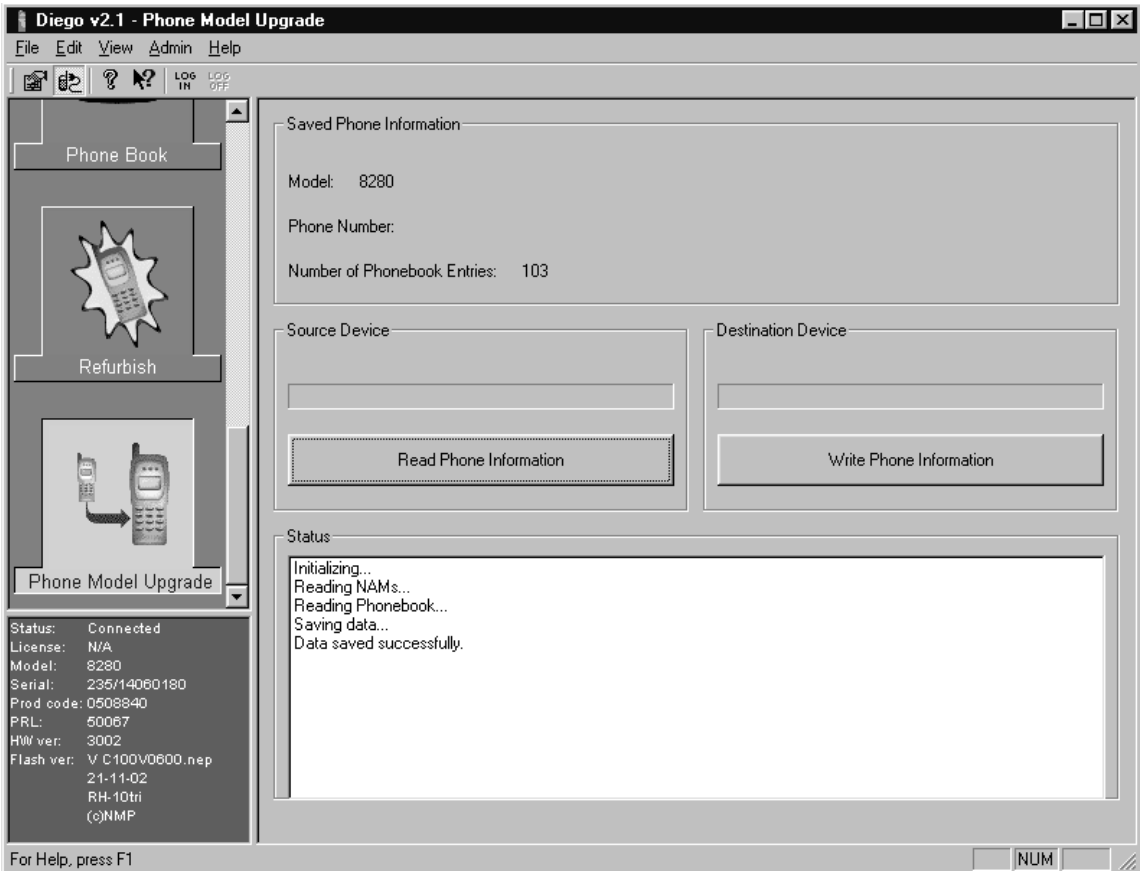
Refurbish function, previously only available for DCT-4 model phones, is now also available for DCT-3 models. The primary purpose of performing Refurb is to remove all user data and reset a phone to factory value settings. When completed, the phone will be configured just like a new one right out of the box. Care should be taken to not confuse this function with software upgrade or another feature in that customer data will be lost completely and will not be recoverable.



During the Refurb process, besides removing all user data, the phone software will be checked and updated if needed. If the PRL is outdated, it is necessary to check "Replace PRL" button and then browse to the file with PRLs and select the desired version to be loaded.

Phone Model Upgrade

This is a new feature not previously available. With Phone Model Upgrade, it is possible to automatically transfer key information (phonebook and NAM data) from one model of phone to a new different model. This function is similar to User Data Transfer. The difference is that not all user data will be transferred — only phonebook and NAM. One other stipulation is that a dongle that supports both DCT-3 and DCT-4 (e.g., the FLS-4S) must be used.

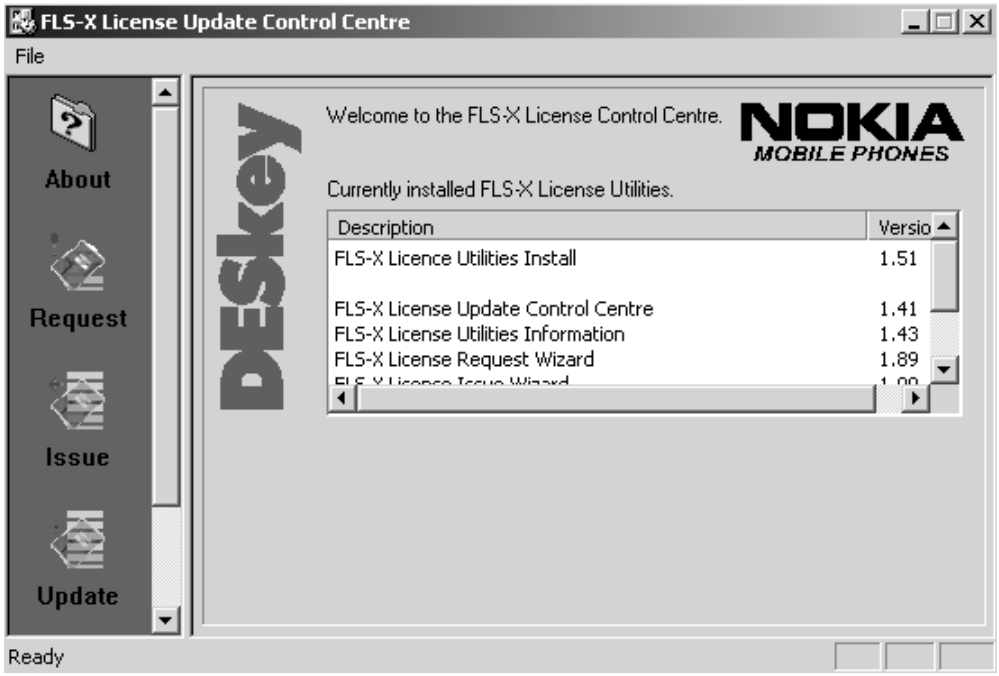


After reading the old phone, disconnect it, change the cable plugged into the FLS-4S to a version for the new phone, and allow the program to make connection to the new phone. When connection is made (status box in lower left is green) select the **Write Phone Information** button. The new phone is now ready for activation with the network.

License Update Request Process

The FLS-4S is shipped in an operational state containing typically 50 flash licenses. Once the FLS-4S has been registered with Nokia, by completing and sending the registration request form to Nokia Regional AMS, more licenses for the FLS-4S can be requested using the following process. Make sure your FLS-4S is registered before requesting licenses, otherwise your request will not be processed.

First, a license request must be generated. The program to perform this can be found under "File" on the main tool bar. Select "Launch FL-X Licence Update Utility". Follow the prompts to create the request data.



Generate a license request

1. Connect the FLS-4S that requires more licenses to the PC Parallel or USB port.

2. Using the FLS-X License Update Utility, press the **Request** button on the left hand-side of the dialog, which will display a welcome screen.

3. Press the **Next** button. The status bar at the bottom of the dialog will indicate that the application is searching for the FLS-4S and retrieving current license information from the FLS-4S. This may take a few moments.

4. This will result in the following screen:

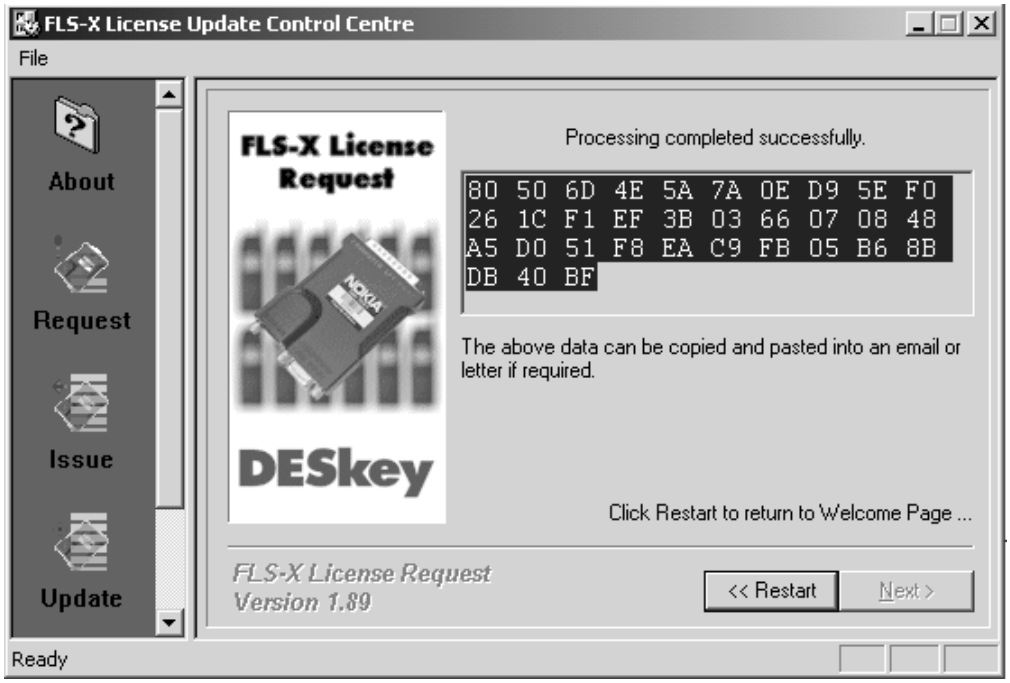
"Current Licenses" is the number of licenses remaining in the FLS-4S device. "Request Licenses" is the number of licenses that may be added to the FLS-4S by a request to Nokia.

Note: The FLS-X License Update Utility will not allow a request to be generated that will increase the Current License count to greater than the License Limit.

5. Press the **Next** button. This screen will prompt for a file to save the license request in, and/or send to printer to print the license request.

6. Select "Save to File" and/or "Send to Printer" and enter the filename and printer name as appropriate. The default filename will be the FLS-X Serial Number with an extension of *.req*.

7. Press the **Next** button. The FLS-X License Update Utility then processes the request and displays the resulting license request string. This string will also be saved automatically to the specified filename and/or printed to the specified printer.


FLS-X License Update Control Centre
File
About
Request
Issue
Update
FLS-X License Request
DESkey
Processing completed successfully.
80 50 6D 4E 5A 7A 0E D9 5E F0
26 1C F1 EF 3B 03 66 07 08 48
A5 D0 51 F8 EA C9 FB 05 B6 8B
DB 40 BF
The above data can be copied and pasted into an email or letter if required.
Click Restart to return to Welcome Page ...
FLS-X License Request
Version 1.89
<< Restart
Next >
Ready

8. Send this license request to Nokia via an email to the regional AMS support office.

Processing a License Update Response:

1. Connect the FLS-4S for which that the license response was created for to the PC parallel port or USB port.

2. Using the FLS-X License Update Utility, press the **Update** button on the left hand-side of the dialog, which will display a Welcome screen.

3. Press the **Next** button. Press the **Load from file** button and select the file that containing contains the license response. This will be displayed on in the dialog box.

4. Press the **Next** button. The FLS-X License Update Utility will process the license response and, if correct, will update the license in the FLS-4S.

Note: Once the license response has been successfully processed, a prompt will ask if the file containing the license response should be deleted, as it CANNOT be used again. It is recommended that ALL the response files be deleted. This dialog box also contains a

check box. If this box is checked, the dialog box will not be displayed again.

Uninstalling Diego

As mentioned in the *Installing Diego* section, it may be necessary or desirable to remove Diego. Care must be taken to follow this procedure. Failure to remove the program properly will cause misconfiguration of the computer's registry.

Uninstalling Diego version:

- Go to the computer's "Control Panel", selectable from the **Start** button or the "My Computer" desktop icon.
- Select "Add/Remove Programs" icon.
- Select the Diego version to be removed, and click the **Add/Remove** button.
- Click on the **OK** button to begin the process of removal.
- Follow the on-screen instructions.

Be sure to reboot the computer when finished.